REMARKS

Election Requirement

Applicant respectfully points out that the original restriction requirement dated May 18,

2005 stated:

"Restriction to one of the following inventions is required under 35 U.S.C. 121:

    I.   Claims 1-12, 16-22, 24, 32-59, 63-69, 71, 77-96, 98-100, 102, and 104-112, drawn to an audio processor for a sound processing system comprising two or three microphones, classified in class 381, subclass 92.

    II.   Claims 13-15, 60-62 and 97, drawn to an audio processor for a sound processing system comprising two microphones and having an microphone equalizer, classified in class 381, subclass 92.

    III.   Claims 23, 70, and 101, drawn to an audio processor for a sound processing system comprising two microphones with two analog to digital converters having different resolutions, classified in class 341, subclass 143.

    IV.   Claims 25-31, 72-76, and 103, drawn to an audio processor for a sound processing system comprising two microphones with a forward beamformer in the forward filter, classified in class 381, subclass 92.

The inventions are distinct, each from the other because of the following reasons:

    Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (I) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the equalization of the microphone signals can be accomplished regardless of the processing thereafter. The subcombination has separate utility such as determining the direction of speech.

    Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different effects due to the preprocessing of the signals processed by the wave parameter estimator.

    Inventions I and IV are unrelated. Inventions are unrelated if it can be

shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different effects because the forward filter in Invention IV controls the gain based on the signals after they are passed through a beamformer.

Because these inventions are distinct for the reasons given above and the search required for Groups I, II, III and IV are separate, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species of the claimed invention: .

Examiner will elucidate the species without referencing specific drawings, as this is more efficient.

In the event Applicant chooses Group I, there are the following species: Applicant must first elect between a two or three microphone embodiment. In the case of a two microphone embodiment election, Applicant must then elect between the embodiments of one forward filter and two forward filters. In the case of the one forward filter embodiment, Applicant must then elect between a forward filter gain controller and look-up table containing a predetermined gain as mechanism for forward filtering the input signals. In the event Applicant chooses to elect the forward filter gain controller embodiment, Applicant must elect between embodiments which have a wave parameter estimator which disregards the amplitude information of the input signals or not. In the case, Applicant chooses to elect the wave parameter estimator that does not disregard the amplitude information, Applicant must elect an equation solving method in the wave parameter estimator from direct solving, iteration, parameter scan, solution screening/optimizing for minimal power technique, look-up table containing pre-computed solutions. In addition, Applicant must elect a forward filter which either compares the parameter estimate to a predetermined threshold, uses a wave direction parameter estimate, or uses a wave damping parameter estimate.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic claim.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by

37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species, MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR
1.143)."

In response to that restriction requirement, on January 9, 2006 applicant responded by electing:

"The application stands subject to a restriction requirement in which Group I has been designated in the Office Action to include claims 1-12, 16-22, 24, 32-59, 63-69, 71, 77-96, 98-100, 102 and 104-112 which are drawn to an audio processor for a sound processing system comprising two or three microphones, classified in class 381, subclass 92; Group II to include claims 13-15, 60-62 and 97 which are drawn to an audio processor for a sound processing system comprising two microphones and having a microphone equalizer, classified in class 381, subclass 92; Group III to include claims 23, 70 and 101 which are drawn to an audio processor for a sound processing system comprising two microphones with two analog to digital converters having different resolutions, classified in class 341, subclass 143; and Group IV to include claims 25-31, 72-76 and 103 which are drawn to an audio processor for a sound processing system comprising two microphones with a forward beamformer in the forward filter, classified in class 381, subclass 92.

The Applicant hereby elects, without traverse, to prosecute the claims of Group I. In the species restrictions, Applicant elects as follows:

1)   Two Microphone Embodiment
2)   One Forward Filter
3)   Forward Filter Gain Controller
4)   Wave Parameter Estimator Disregards Amplitude

The readable claims are:
1-5, 16-17, 19-20, 24, 33, 35, 37-41, 44, 46-49, 51, 63-66, 71, 78, 80, 82-86, 89, 91, 98, 102, 105, 107, 109-111.

The Applicant reserves the right to pursue the remainder of the claims in a continuation, continuation-in-part and/or divisional application."

Accordingly, since applicant has elected the embodiment that disregards amplitude information, it is not understood how or why applicant should now be required to chose one of the five equation solving methods and one of the three forward filters.

Reconsideration is respectfully requested.

In order to comply with the restriction requirement, applicant provisionally elects:

For the equation solving method in the wave parameter estimator, applicant provisionally elects: 1) direct solving.
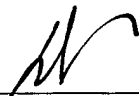
For the forward filter, applicant further provisionally elects: 2) uses a wave direction parameter estimate.

Applicants respectfully request that a timely Notice of Allowance be issued in this case. Please charge any additional required fee or credit any overpayment not otherwise paid or credited to our deposit account No. 50-1698.

Respectfully submitted,

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